

SURVEILLANCE REPORT

Weekly influenza surveillance overview

30 November 2012

Main surveillance developments in week 47/2012 (19–25 November 2012)

This first page contains the main developments for this week and can be printed separately or together with the more detailed information that follows.

Weekly reporting on influenza surveillance in Europe for the 2012–13 season started in week 40/2012.

- In week 47/2012, all 28 countries reporting experienced low-intensity activity of influenza-like illness or acute respiratory infection.
- Of 519 sentinel specimens tested across 23 countries, only 16 (3.1%) were positive for influenza virus.
- No hospitalised laboratory-confirmed influenza cases were reported.
- The number of reported detections of respiratory syncytial viruses (RSV) have risen substantially since week 42, as usually happens at this time of year.

Although the proportion of positive sentinel specimens has increased slightly since the early weeks of the season, there is currently little evidence of sustained influenza virus transmission in EU/EEA countries. Much of the clinical influenza activity is probably due to other respiratory pathogens including RSV.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): Clinical influenza activity of low intensity was notified by all 28 countries reporting, with the majority of them indicating no geographic spread. For more information, [click here](#).

Virological surveillance: Twenty-seven countries reported virological data. Sentinel physicians collected 519 specimens, of which 16 (3.1%) tested positive for influenza virus. For more information, [click here](#).

Hospital surveillance of laboratory-confirmed influenza cases: In week 47/2012, no hospitalised laboratory-confirmed influenza cases were reported. For more information, [click here](#).

Sentinel surveillance (ILI/ARI)

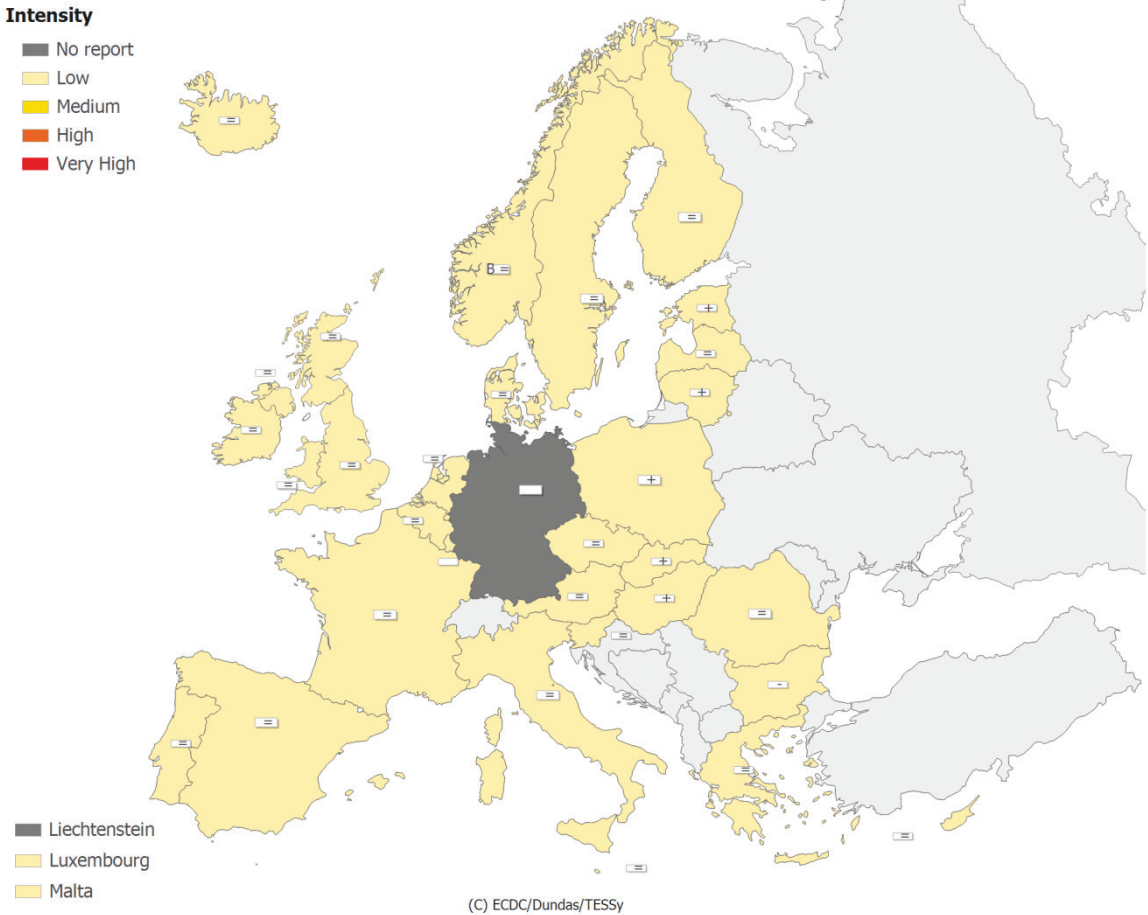
Weekly analysis – epidemiology

During week 47/2012, all 28 countries reporting clinical data experienced low-intensity influenza activity (Table 1, Map 1).

Geographic spread was reported as local by Malta and sporadic by 12 countries. The remaining 15 countries reported no activity (Table 1, Map 2).

Stable trends in clinical activity were reported by 20 countries while increasing trends were reported by Estonia, Hungary, Lithuania, Poland and Slovakia – four more countries than in week 46/2012. A decreasing trend was reported by Bulgaria (Table 1, Map 2). Given the absence of influenza-positive sentinel specimens from the countries reporting an increasing trend, the ILI/ARI rates observed are probably due to other respiratory pathogens, such as respiratory syncytial virus.

Map 1. Intensity for week 47/2012

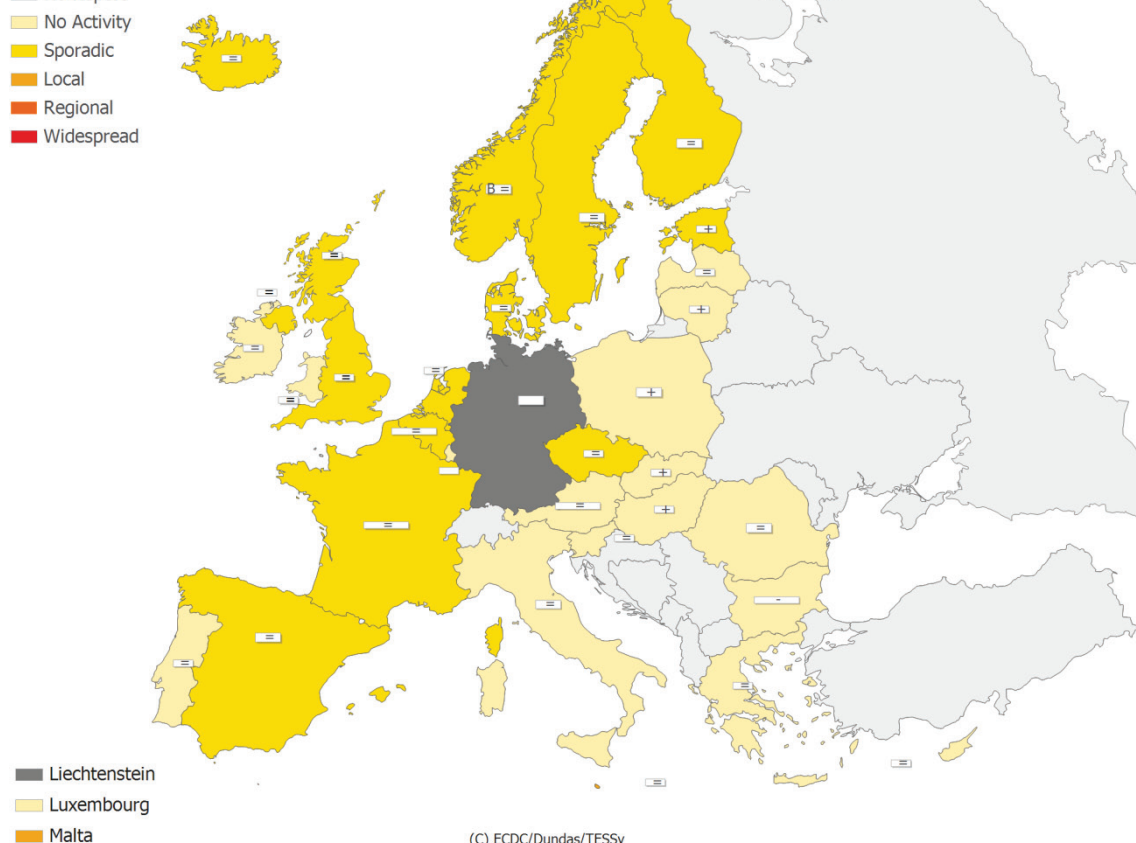


* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.
Legend:

No report	Intensity level was not reported	+	Increasing clinical activity
Low	No influenza activity or influenza at baseline levels	-	Decreasing clinical activity
Medium	Usual levels of influenza activity	=	Stable clinical activity
High	Higher than usual levels of influenza activity	B	Type B
Very high	Particularly severe levels of influenza activity		

Map 2. Geographic spread for week 47/2012**Geographic spread**

- No Report
- No Activity
- Sporadic
- Local
- Regional
- Widespread



* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

Legend:

No report	Activity level was not reported	+	Increasing clinical activity
No activity	No evidence of influenza virus activity (clinical activity remains at baseline levels)	-	Decreasing clinical activity
		=	Stable clinical activity
Sporadic	Isolated cases of laboratory confirmed influenza infection	B	Type B
Local outbreak	Increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region (laboratory confirmed)		
Regional activity	Influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population (laboratory confirmed)		
Widespread	Influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population (laboratory confirmed)		

Table 1. Epidemiological and virological overview by country, week 47/2012

Country	Intensity	Geographic spread	Trend	No. of sentinel specimens	Dominant type	Percentage positive	ILI per 100 000	ARI per 100 000	Epidemiological overview	Virological overview
Austria	Low	No activity	Stable	6	None	0.0	19.1	-	Graphs	Graphs
Belgium	Low	Sporadic	Stable	12	None	8.3	64.8	1721.6	Graphs	Graphs
Bulgaria	Low	No activity	Decreasing	0	None	0.0	-	985.9	Graphs	Graphs
Cyprus	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Czech Republic	Low	Sporadic	Stable	11	None	0.0	26.7	920.8	Graphs	Graphs
Denmark	Low	Sporadic	Stable	2	None	0.0	14.7	-	Graphs	Graphs
Estonia	Low	Sporadic	Increasing	5	None	0.0	7.0	247.2	Graphs	Graphs
Finland	Low	Sporadic	Stable	21	None	4.8	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	78	None	7.7	-	1626.9	Graphs	Graphs
Germany				78	None	2.6	-	-	Graphs	Graphs
Greece	Low	No activity	Stable	0	None	0.0	54.9	-	Graphs	Graphs
Hungary	Low	No activity	Increasing	17	None	0.0	58.8	-	Graphs	Graphs
Iceland	Low	Sporadic	Stable	0	None	0.0	2.5	-	Graphs	Graphs
Ireland	Low	No activity	Stable	8	None	12.5	8.6	-	Graphs	Graphs
Italy	Low	No activity	Stable	16	None	0.0	91.8	-	Graphs	Graphs
Latvia	Low	No activity	Stable	0	None	0.0	0.0	917.9	Graphs	Graphs
Lithuania	Low	No activity	Increasing	5	None	0.0	2.0	510.0	Graphs	Graphs
Luxembourg	Low	No activity	No information available	16	None	0.0	-*	-*	Graphs	Graphs
Malta	Low	Local	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	Sporadic	Stable	10	None	20.0	29.1	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	6	B	0.0	32.3	-	Graphs	Graphs
Poland	Low	No activity	Increasing	13	None	0.0	110.8	-	Graphs	Graphs
Portugal	Low	No activity	Stable	6	None	0.0	4.9	-	Graphs	Graphs
Romania	Low	No activity	Stable	12	-	0.0	2.1	656.8	Graphs	Graphs
Slovakia	Low	No activity	Increasing	5	None	0.0	131.5	1414.5	Graphs	Graphs
Slovenia	Low	No activity	Stable	11	None	0.0	1.3	942.3	Graphs	Graphs
Spain	Low	Sporadic	Stable	59	None	1.7	14.2	-	Graphs	Graphs
Sweden	Low	Sporadic	Stable	24	None	0.0	2.5	-	Graphs	Graphs
UK - England	Low	Sporadic	Stable	68	None	2.9	7.9	356.5	Graphs	Graphs
UK - Northern Ireland	Low	Sporadic	Stable	3	None	0.0	10.5	444.1	Graphs	Graphs
UK - Scotland	Low	Sporadic	Stable	24	None	0.0	9.7	412.8	Graphs	Graphs
UK - Wales	Low	No activity	Stable	3	None	0.0	6.5	-	Graphs	Graphs
Europe				519		3.1			Graphs	Graphs

**Incidence per 100 000 is not calculated for these countries as no population denominator is provided.
Liechtenstein does not report to the European Influenza Surveillance Network.*

Description of the system

Surveillance is based on nationally organised sentinel networks of physicians, mostly general practitioners (GPs), covering at least 1 to 5% of the population in their countries. All EU/EEA Member States (except Liechtenstein) participate. Depending on their country's choice, each sentinel physician reports the weekly number of patients seen with ILI, ARI, or both to a national focal point. From the national level, both numerator and denominator data are then reported to the European Surveillance System (TESSy) database. Additional semi-quantitative indicators of intensity, geographic spread, and trend of influenza activity at the national level are also reported.

Virological surveillance

Weekly analysis – virology

In week 47/2012, 27 countries reported virological data. Of 519 sentinel specimens tested, 16 (3.1%) were positive for influenza virus (Tables 1–2, Figure 1). In addition, 90 non-sentinel source specimens (e.g. specimens collected for diagnostic purposes in hospitals) were found to be positive for influenza virus (Table 2).

Of the 106 influenza viruses detected from sentinel and non-sentinel sources during week 47/2012, 49 (46.2%) were type A and 57 (53.8%) were type B. Of the 24 influenza A viruses subtyped, 13 (54.2%) were A(H3) and 11 (45.8%) were A(H1)pdm09. Three B viruses were characterised further: two (66.7%) were of B-Yamagata lineage and one (33.3%) of B-Victoria lineage (Table 2, Figures 2 and 3).

Of the 79 influenza virus detections in sentinel specimens since week 40/2012, 44 (55.7%) were type A, and 35 (44.3%) were type B viruses. Of 36 influenza A viruses subtyped, 28 (77.8%) were A(H3) and eight (22.2%) were A(H1)pdm09 (Table 2, Figure 2).

Of the 458 influenza viruses detected from non-sentinel sources since week 40/2012, 281 (61.4%) were type A, and 177 (38.6%) were type B. Of 148 type A viruses subtyped, 77 (52%) were A(H1)pdm09 and 71 (47%) A(H3). The lineage of 31 (93.9%) type B viruses was Yamagata and two (6.1%) were Victoria (Table 2, Figure 3).

Since week 40/2012, 15 antigenic characterisations of influenza viruses have been reported. Two of these have been characterised as A/Perth/16/2009 (H3N2)-like; six as A/Victoria/361/2011 (H3N2)-like; three as B/Florida/4/2006-like (Yamagata lineage); and two as B/Wisconsin/1/2010-like (Yamagata lineage). One A(H3) and one B (Yamagata lineage) virus were not attributed to a category (Figure 4).

Since week 40/2012, 26 genetic characterisations of influenza viruses have been reported for sentinel and non-sentinel specimens: four A(H1) viruses belonged to two genetic groups, 11 A(H3) to three groups, two B (Victoria lineage) to one group and nine B (Yamagata lineage) viruses to two different genetic groups. Most of the viruses fell in either the A/Victoria/361/2011 (H3N2) group 3C or in the B (Yamagata) lineage clade representative B/Estonia/55669/2011 group (Figure 5).

More details on circulating viruses can be found in the [October report](#) prepared by the Community Network of Reference Laboratories (CNRL) coordination team. The viruses circulating this season remain well-matched with the 2012/13 seasonal vaccine viruses.

Since week 40/2012, a total of 15 viruses have been tested for antiviral drug susceptibility. All of the three A(H1N1)pdm09, nine A(H3N2) and three B viruses tested were susceptible to oseltamivir and zanamivir. The two A(H1N1)pdm09 and seven A(H3N2) viruses assessed carried the M2 protein S31N amino acid substitution associated with M2 blocker (adamantane) resistance.

In week 47/2012, 11 countries reported 1 076 respiratory syncytial virus detections (Figure 6).

Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40–47/2012

Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	9	40	44	281
A(H1)pdm09	2	9	8	77
A(H3)	7	6	28	71
A(sub-type unknown)	0	25	8	133
Influenza B	7	50	35	177
B(Vic) lineage	1	0	2	2
B(Yam) lineage	1	1	1	31
Unknown lineage	5	49	32	144
Total influenza	16	90	79	458

Note: A(H1)pdm09 and A(H3) include both N-subtyped and non-N-subtyped viruses

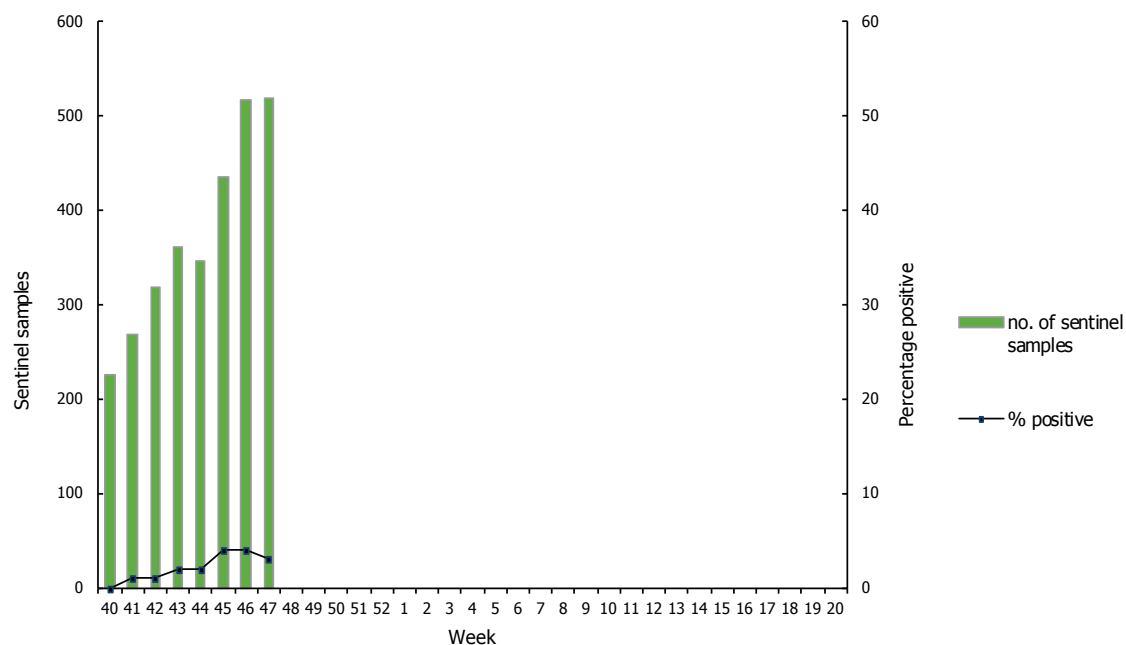
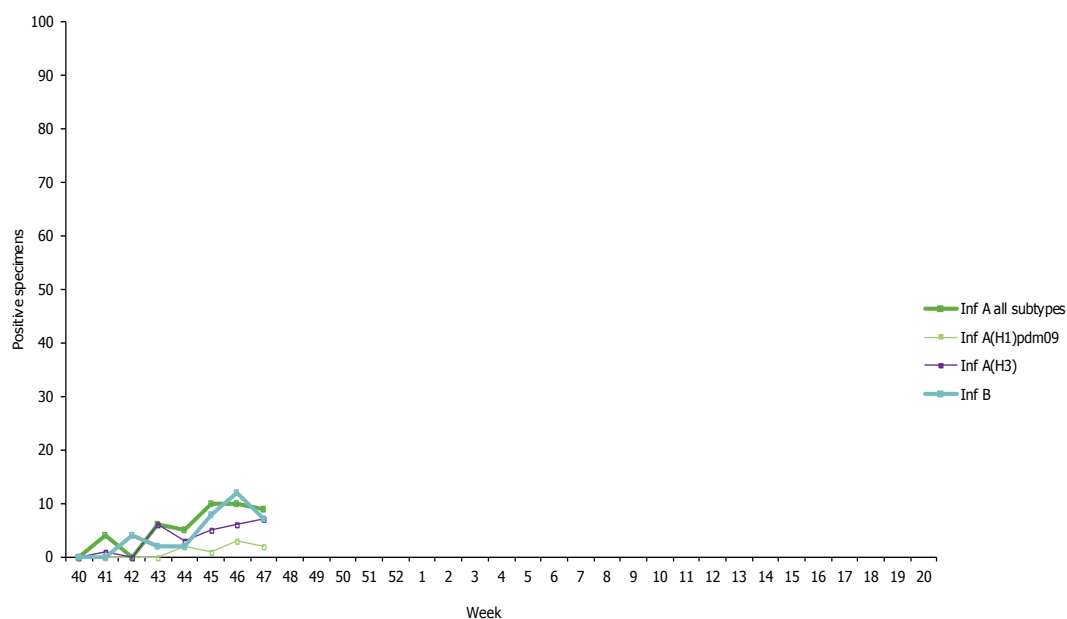
Figure 1. Proportion of sentinel specimens positive for influenza virus, weeks 40–47/2012**Figure 2. Number of sentinel specimens positive for influenza virus, by type, subtype and by week of report, weeks 40–47/2012**

Figure 3. Number of non-sentinel specimens positive for influenza virus by type, subtype and week of report, weeks 40–47/2012

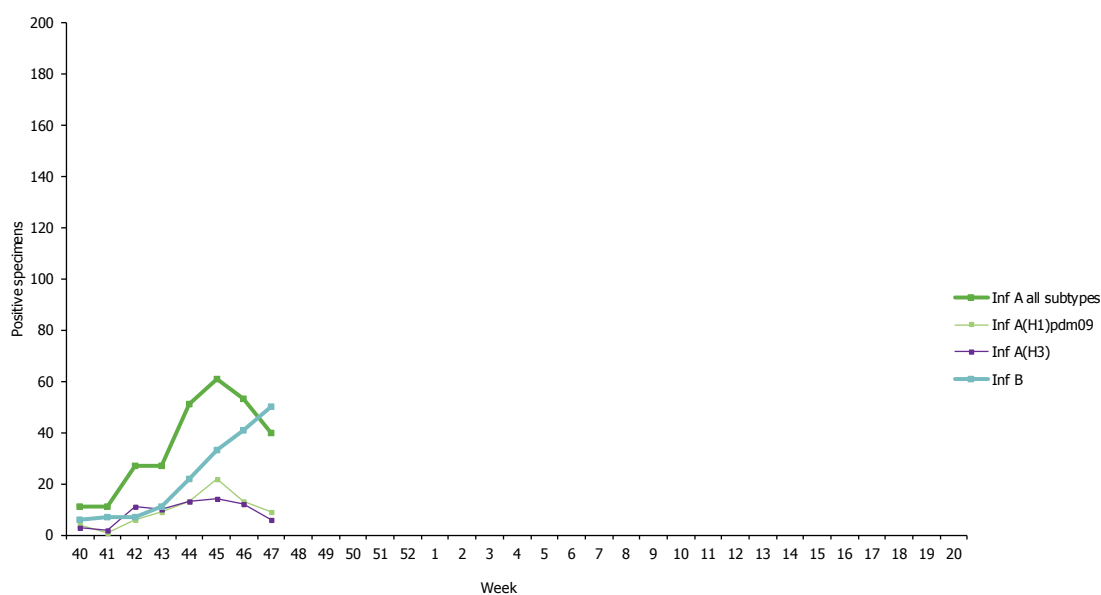
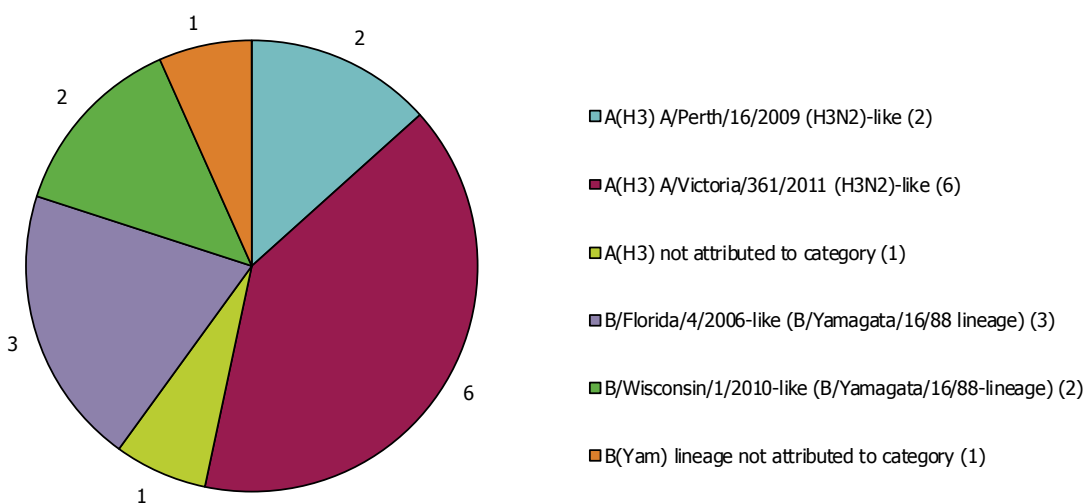
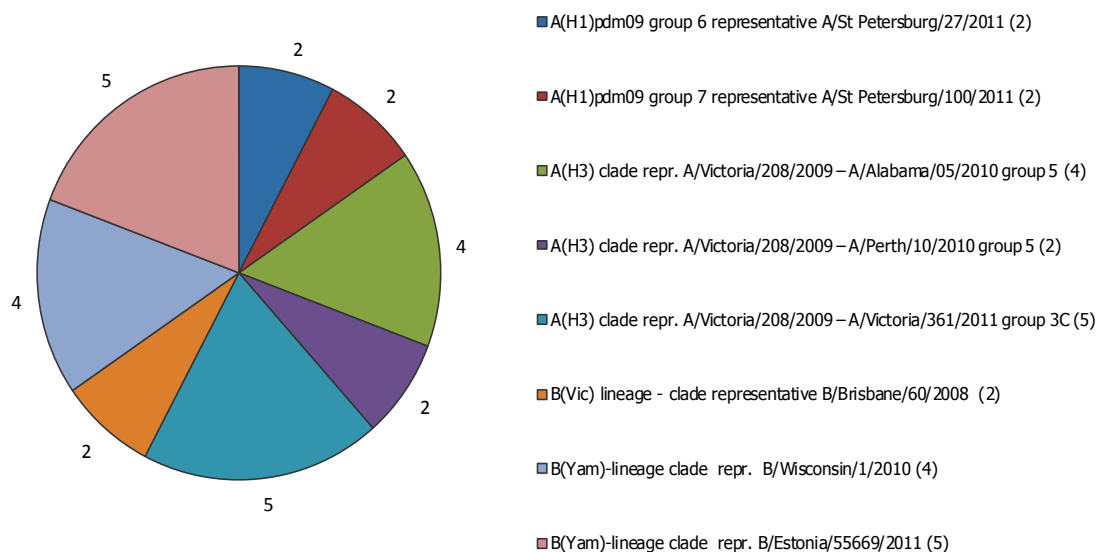


Figure 4. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–47/2012



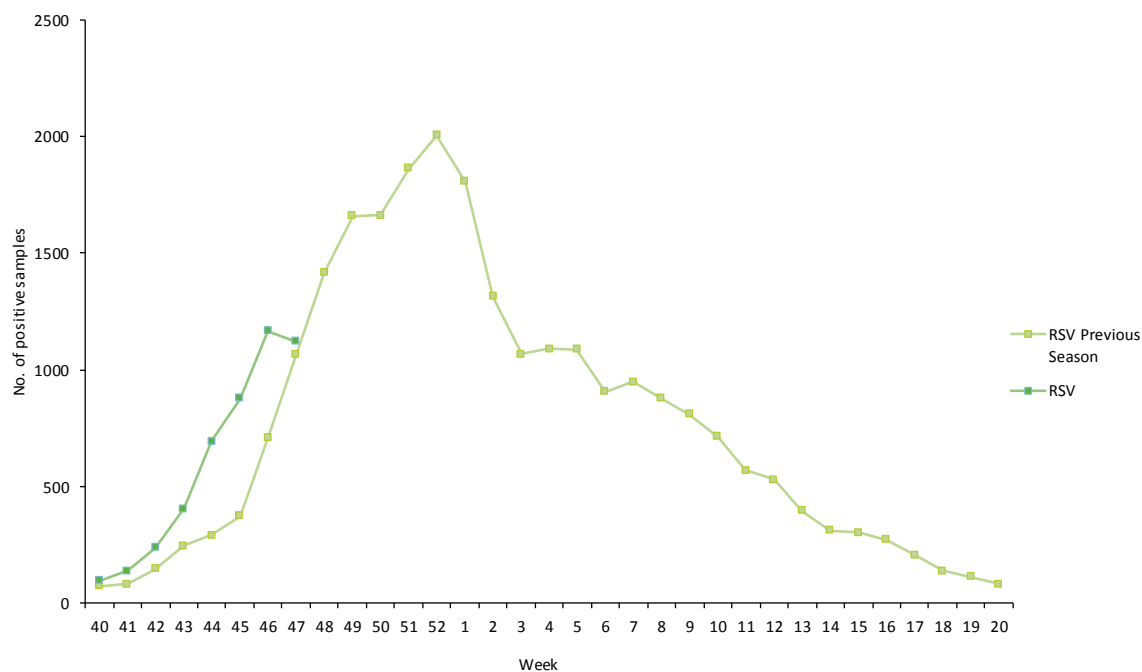
Note: Not all detected influenza viruses are characterised and therefore the proportion of detections and characterisations may be different for each subtype/lineage.

Figure 5. Results of genetic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–47/2012



Note: Not all detected influenza viruses are characterised and therefore the proportion of detections and characterisations may be different for each subtype/lineage.

Figure 6. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40–47/2012



Country comments

Denmark: The majority of samples that have tested positive for influenza A and B in Denmark so far have come from travellers returning from the Middle East.

Norway: A moderate and increasing number of influenza virus detections. A(H1)pdm09, A(H3) and B Yamagata lineage viruses are circulating sporadically, with influenza B (Yamagata lineage) starting to emerge as the most predominant.

Spain: Since week 40/2012, 452 sentinel specimens have been tested for influenza. Of those, nine were positive for influenza B virus and one for influenza C. No influenza A viruses have been identified so far in Spain. There is sporadic circulation of influenza B viruses (mainly in the north of Spain) and one of them has been genetically characterised as B Yamagata lineage (clade B/Wisconsin/1/2010).

Description of the system

According to the nationally defined sampling strategy, sentinel physicians take nasal or pharyngeal swabs from patients with ILI, ARI or both and send the specimens to influenza-specific reference laboratories for virus detection, (sub-)typing, antigenic or genetic characterisation and antiviral susceptibility testing.

For details of the current virus strains recommended by WHO for vaccine preparation [click here](#).

Hospital surveillance – severe influenza disease

Weekly analysis of hospitalised laboratory-confirmed influenza cases

In week 47/2012, no hospitalised laboratory-confirmed influenza cases were reported.

Since week 40/2012, five hospitalised laboratory-confirmed influenza cases have been reported by France, Slovakia and Spain. One case involved an influenza B virus, and of four type A viruses detected in the other patients, one was A(H1)pdm09, one A(H3) and two were not subtyped (Tables 3 and 4).

Table 3. Cumulative number of hospitalised influenza laboratory-confirmed cases, weeks 40–47/2012

Country	Number of cases	Incidence of SARI cases per 100 000 population	Number of fatal cases reported	Incidence of fatal cases per 100 000 population	Estimated population covered
France	1				
Slovakia	1	0.02			5435273
Spain	3				
Total	5		0		

Table 4. Number of hospitalised laboratory-confirmed influenza cases by influenza virus type and subtype, week 47/2012 and cumulative for the season

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A	0	4
A(H1)pdm09	0	1
A(H3)	0	1
A(sub-typing not performed)	0	2
Influenza B	0	1
Total	0	5

This report was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Eeva Broberg, Julien Beauté and René Snacken. The bulletin text was reviewed by the Community Network of Reference Laboratories for Human Influenza in Europe (CNRL) coordination team: Adam Meijer, Rod Daniels, John McCauley and Maria Zambon. On behalf of the EISN members, the bulletin text was reviewed by Amparo Larrauri Cámara (Instituto de Salud Carlos III, Spain), Vincent Enouf (Institut Pasteur, France) and Anne Mazick (Statens Serum Institut, Copenhagen). In addition, the report is reviewed by experts of WHO Regional Office for Europe.

Maps and commentary published in this Weekly Influenza Surveillance Overview (WISO) do not represent a statement on the part of ECDC or its partners on the legal or border status of the countries and territories shown.

All data published in the WISO are up-to-date on the day of publication. Past this date, however, published data should not be used for longitudinal comparisons as countries tend to retrospectively update their database.

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